

SEQUENCE LISTING

<110> Brenda F. Baker
Lex M. Cowsert

<120> ANTISENSE MODULATION OF MATRIX METALLOPROTEINASE 1 EXPRESSION

<130> RTS-0139

<160> 89

<210> 1

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 1

tccgtcatcg ctcctcaggg

20

<210> 2

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 2

atgcattctg cccccaagga

20

<210> 3

<211> 1970

<212> DNA

<213> Homo sapiens

<220>

<220>

<221> CDS

<222> (69)...(1478)

<400> 3

atattggagt agcaagaggc tgggaagcca tcacttacct tgcactgaga aagaagacaa 60

aggccagt atg cac agc ttt cct cca ctg ctg ctg ctg ctg ttc tgg ggt 110

Met His Ser Phe Pro Pro Leu Leu Leu Leu Leu Phe Trp Gly

1

5

10

gtg gtg tct cac agc ttc cca gcg act cta gaa aca caa gag caa gat 158

Val Val Ser His Ser Phe Pro Ala Thr Leu Glu Thr Gln Glu Gln Asp

15

20

25

30

gtg gac tta gtc cag aaa tac ctg gaa aaa tac tac aac ctg aag aat 206

Val Asp Leu Val Gln Lys Tyr Leu Glu Lys Tyr Tyr Asn Leu Lys Asn

35

40

45

gat ggg agg caa gtt gaa aag cgg aga aat agt ggc cca gtg gtt gaa 254

Asp Gly Arg Gln Val Glu Lys Arg Arg Asn Ser Gly Pro Val Val Glu

50

55

60

aaa ttg aag caa atg cag gaa ttc ttt ggg ctg aaa gtg act ggg aaa 302

Lys Leu Lys Gln Met Gln Glu Phe Phe Gly Leu Lys Val Thr Gly Lys

65

70

75

cca gat gct gaa acc ctg aag gtg atg aag cag ccc aga tgt gga gtg 350

Pro Asp Ala Glu Thr Leu Lys Val Met Lys Gln Pro Arg Cys Gly Val

80

85

90

cct gat gtg gct cag ttt gtc ctc act gag ggg aac cct cgc tgg gag 398

Pro Asp Val Ala Gln Phe Val Leu Thr Glu Gly Asn Pro Arg Trp Glu

95

100

105

110

caa aca cat ctg acc tac agg att gaa aat tac acg cca gat ttg cca 446

Gln Thr His Leu Thr Tyr Arg Ile Glu Asn Tyr Thr Pro Asp Leu Pro

115

120

125

10035435101701

[illegible]

atg cgc aca aat ccc ttc tac ccg gaa gtt gag ctc aat ttc att tct 1022
 Met Arg Thr Asn Pro Phe Tyr Pro Glu Val Glu Leu Asn Phe Ile Ser
 305 310 315

gtt ttc tgg cca caa ctg cca aat ggg ctt gaa gct gct tac gaa ttt 1070
 Val Phe Trp Pro Gln Leu Pro Asn Gly Leu Glu Ala Ala Tyr Glu Phe
 320 325 330

gcc gac aga gat gaa gtc cgg ttt ttc aaa ggg aat aag tac tgg gct 1118
 Ala Asp Arg Asp Glu Val Arg Phe Phe Lys Gly Asn Lys Tyr Trp Ala
 335 340 345 350

gtt cag gga cag aat gtg cta cac gga tac ccc aag gac atc tac agc 1166
 Val Gln Gly Gln Asn Val Leu His Gly Tyr Pro Lys Asp Ile Tyr Ser
 355 360 365

tcc ttt ggc ttc cct aga act gtg aag cat atc gat gct gct ctt tct 1214
 Ser Phe Gly Phe Pro Arg Thr Val Lys His Ile Asp Ala Ala Leu Ser
 370 375 380

gag gaa aac act gga aaa acc tac ttc ttt gtt gct aac aaa tac tgg 1262
 Glu Glu Asn Thr Gly Lys Thr Tyr Phe Phe Val Ala Asn Lys Tyr Trp
 385 390 395

agg tat gat gaa tat aaa cga tct atg gat cca ggt tat ccc aaa atg 1310
 Arg Tyr Asp Glu Tyr Lys Arg Ser Met Asp Pro Gly Tyr Pro Lys Met
 400 405 410

ata gca cat gac ttt cct gga att ggc cac aaa gtt gat gca gtt ttc 1358
 Ile Ala His Asp Phe Pro Gly Ile Gly His Lys Val Asp Ala Val Phe
 415 420 425 430

atg aaa gat gga ttt ttc tat ttc ttt cat gga aca aga caa tac aaa 1406
 Met Lys Asp Gly Phe Phe Tyr Phe Phe His Gly Thr Arg Gln Tyr Lys
 435 440 445

ttt gat cct aaa acg aag aga att ttg act ctc cag aaa gct aat agc 1454
 Phe Asp Pro Lys Thr Lys Arg Ile Leu Thr Leu Gln Lys Ala Asn Ser
 450 455 460

tgg ttc aac tgc agg aaa aat tga acattactaa tttgaatgga aaacacatgg 1508
 Trp Phe Asn Cys Arg Lys Asn
 465

tgtgagtcca aagaagggtgt tttcctgaag aactgtctat tttctcagtc atttttaacc 1568
tctagagtca ctgatacaca gaatataatc ttattttatac ctcagtttgc atattttttt 1628
actattttaga atgtagccct ttttgtactg atataattta gttccacaaa tgggtgggtac 1688
aaaaagtcaa gtttgtggct tatggattca tataggccag agttgcaaag atctttttcca 1748
gagtatgcaa ctctgacggt gatcccagag agcagcttca gtgacaaaca taccctttca 1808
agacagaaag agacaggaga catgagtctt tgccggagga aaagcagctc aagaacacat 1868
gtgcagtcac tgggtgtcacc ctggataggc aagggataac tcttctaaca caaataagt 1928
gttttatggt tggaataaag tcaaccttgt ttctactgtt tt 1970

<210> 4
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 4
cctcgctggg agcaaaca 18

<210> 5
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 5
tctcaatggc atgggccaca t 21

<210> 6

10035435-10704

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Probe

<400> 6

tctgacctac aggattgaaa attacacgcc a

31

<210> 7

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 7

gaaggtgaag gtcggagtc

19

<210> 8

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 8

gaagatggtg atgggatttc

20

<210> 9

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

100345003345003

<223> PCR Probe

<400> 9

caagcttccc gttctcagcc

20

<210> 10

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 10

gcctcttgct actccaatat

20

<210> 11

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 11

aaggtaagtg atggcttccc

20

<210> 12

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 12

ctggcctttg tcttctttct

20

10/2010 "GSHG001"

<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 13
gcagtggagg aaagctgtgc

20

<210> 14
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 14
acaccccaga acagcagcag

20

<210> 15
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 15
cgctgggaag ctgtgagaca

20

<210> 16
<211> 20
<212> DNA

100348-1011
T040T0348001

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 16

ttgctcttgt gtttctagag

20

<210> 17

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 17

ttctggacta agtcacatc

20

<210> 18

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 18

cccatcattc ttcaggttgt

20

<210> 19

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

TOPT-3450F

<400> 19

tctccgcttt tcaacttgcc

20

<210> 20

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 20

ttcaaccact gggccactat

20

<210> 21

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 21

tttcagccca aagaattcct

20

<210> 22

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 22

cagcatctgg tttcccagtc

20

T040734507

<210> 23
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 23
tgcttcatca ccttcagggt

20

<210> 24
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 24
atcaggcact ccacatctgg

20

<210> 25
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 25
cagtgaggac aaactgagcc

20

<210> 26
<211> 20
<212> DNA
<213> Artificial Sequence

1003548 "1003548"

<220>

<223> Antisense Oligonucleotide

<400> 26

tgctcccagc gagggttccc

20

<210> 27

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 27

aatcctgtag gtcagatgtg

20

<210> 28

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 28

gcaaattctgg cgtgtaattt

20

<210> 29

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 29

100543-10101

tggtccacat ctgctcttgg

20

<210> 30

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 30

ggaaggcttt ctcaatggca

20

<210> 31

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 31

gtgacattac tccagagttg

20

<210> 32

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 32

ccttggtgaa tgtcagaggt

20

<210> 33

<211> 20

100549-934500

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 33

tgtctgcttg accctcagag

20

<210> 34

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 34

ccctgacaaa agatatcatg

20

<210> 35

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 35

gagagttgtc ccgatgatct

20

<210> 36

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

1003549 1003550

<223> Antisense Oligonucleotide

<400> 36

ttcctccagg tccatcaaaa

20

<210> 37

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 37

ttgaaaagca tgagcaagat

20

<210> 38

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 38

cccctccaat acctgggcct

20

<210> 39

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 39

catcttcac taaaatgagca

20

1003343-10101

<210> 40
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 40
ctgaaattgt tgggccacct

20

<210> 41
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 41
aacacgatgt aagttgtact

20

<210> 42
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 42
atggccgagt tcatgagccg

20

<210> 43
<211> 20
<212> DNA
<213> Artificial Sequence

1003543-10101

<223> Antisense Oligonucleotide

[illegible]

<400> 46

cctgagctag ctgaacatca

20

<210> 47

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 47

gcttg gatgc catcaatgtc

20

<210> 48

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 48

tttgggaacg tccatatatg

20

<210> 49

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 49

ggccgatggg ctggacagga

20

<210> 50

T.O.T. 1035435 103701

<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 50
caaaggtag cttactgtca

20

<210> 51
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 51
cccgaatcgt agttatagca

20

<210> 52
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 52
ctttaaagaa catcacttct

20

<210> 53
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

10035435 101701

<223> Antisense Oligonucleotide

<400> 53

ttgtgcgcac gtagaatctg

20

<210> 54

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 54

caacttccgg gtagaaggga

20

<210> 55

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 55

aaacagaaat gaaattgagc

20

<210> 56

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 56

catttgccag ttgtggccag

20

10036436 404

<210> 57
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 57
aattcgtaag cagcttcaag

20

<210> 58
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 58
cggacttcat ctctgtcggc

20

<210> 59
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 59
tccctgaaca gcccgact

20

<210> 60
<211> 20
<212> DNA

103543E-10404

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 60

gtatccgtgt agcacattct

20

<210> 61

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 61

agttctaggg aagccaaagg

20

<210> 62

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 62

agcagcatcg atatgcttca

20

<210> 63

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

Sequence 1000

<400> 63
ttccagtgtt ttcctcagaa 20

<210> 64
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 64
atacctccag tatttgtag 20

<210> 65
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 65
catagatcgt ttatattcat 20

<210> 66
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 66
atatttgggat aacctggatc 20

1003543 10304
1020304 10304

<210> 67
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 67
ccaggaaagt catgtgctat

20

<210> 68
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 68
gcatcaactt tgtggccaat

20

<210> 69
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 69
aaatccatct ttcataaaa

20

<210> 70
<211> 20
<212> DNA
<213> Artificial Sequence

1003648-10201

<220>

<223> Antisense Oligonucleotide

<400> 70

caaatttgta ttgtcttggt

20

<210> 71

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 71

aaaattctct tcgttttagg

20

<210> 72

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 72

ctattagctt tctggagagt

20

<210> 73

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 73

10035435 101701

aaattagtaa tgttcaattt

20

<210> 74

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 74

ttggactcac accatgtgtt

20

<210> 75

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 75

ttcttcagga aaacaccttc

20

<210> 76

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 76

atgactgaga aaatagacag

20

<210> 77

<211> 20

10035435 101301

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 77

ttatattctg tgtatcagtg

20

<210> 78

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 78

caaactgagg tataaataag

20

<210> 79

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 79

aactaaatta tatcagtaca

20

<210> 80

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

10035485 101701

<223> Antisense Oligonucleotide

<400> 80

ttttgtaccc accatttgtg

20

<210> 81

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 81

ctctggccta tatgaatcca

20

<210> 82

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 82

ctctggaaaa gatctttgca

20

<210> 83

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 83

atcaacgtca gagttgcata

20

<210> 84
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 84
tcactgaagc tgctctctgg

20

<210> 85
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 85
gtcttgaaag gatatgtttg

20

<210> 86
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 86
catgtctcct gtctctttct

20

<210> 87
<211> 20
<212> DNA
<213> Artificial Sequence

1005435-101001

<220>

<223> Antisense Oligonucleotide

<400> 87

tgcttttcct ccggcaaaga

20

<210> 88

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 88

gactgcacat gtgttcttga

20

<210> 89

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 89

ttttgtgtta gaagagttat

20

1003436 10404